

Abstract

An apparatus for forming an image using an electrophoretic particle suspension containing media including: a transitioner for sufficiently lowering a viscosity of the suspension to facilitate mobility of at least some of the electrophoretic particles; and, imaging electrodes for selectively providing an imaging electric field associated with the image to be formed and positioned with respect to the transitioner such that the imaging electric field impinges upon the lowered viscosity suspension; wherein, the imaging electric field is sufficient to cause select ones of the electrophoretic particles in the lowered viscosity suspension to migrate depending upon the image to be formed. The media includes a plurality of substrates defining an interior hollow including an electrophoretic particle containing, phase-transitional suspension suitable for enabling migration of the electrophoretic particles responsively to an applied electric field in a first state and substantially impeding migration of the particles in a second state.